

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all previous listings, and versions, of claims in the application.

Listing of Claims:

1. (currently amended) An assembly including a substrate and a conductive trace disposed on the substrate, the trace having at least two sides that are substantially parallel to each other, wherein the trace includes a plurality of unaligned nanotubes for providing a plurality of conductive pathways along the trace.
2. (previously presented) The assembly of claim 1 wherein the nanotubes include single walled carbon nanotubes.
3. (previously presented) The assembly of claim 1 wherein the nanotubes include multi-walled nanotubes.
4. (previously presented) The assembly of claim 1 wherein the nanotubes have different lengths.
5. (previously presented) The assembly of claim 1 wherein the nanotubes include nanotubes having a length shorter than the length of the article.
6. (currently amended) An assembly including a substrate and a conductive trace disposed on the substrate, the trace having a width and a length, the length being substantially larger than the width, wherein the trace includes an electrical network of a plurality of unaligned nanotubes in contact with other nanotubes to provide a plurality of conductive pathways along the trace.
7. (original) The assembly of claim 6 wherein the nanotubes include single walled carbon nanotubes.
8. (original) The assembly of claim 6 wherein the nanotubes include multi-walled carbon nanotubes.
9. (original) The assembly of claim 6 wherein the nanotubes have different lengths.

10. (original) The assembly of claim 6 wherein the nanotubes include nanotubes having a length shorter than the length of the ribbon.
11. (previously presented) An assembly including a substrate and a conductive trace of predefined shape, the conductive trace being over the substrate, the conductive trace including a plurality of unaligned nanotubes for providing a plurality of conductive paths along the extent of the trace.
12. (previously presented) An assembly including a substrate, at least one metal electrode, and a conductive trace of predefined shape, the conductive trace being over the substrate, the conductive trace including a plurality of unaligned nanotubes for providing a plurality of conductive paths along the extent of the trace, and the metal electrode being over at least a portion of the conductive trace, the metal electrode being formed by a metallization step.
13. (currently amended) A wafer substrate structure having a non-woven fabric of unaligned nanotubes substantially parallel to and covering a major surface of the wafer substrate, the major surface of the substrate comprising a plurality of patterned conductors, and wherein the nanotubes of the fabric are arranged in accordance with inherent self-assembly traits of the nanotubes.
14. (currently amended) A wafer substrate structure having a non-woven fabric of unaligned nanotubes covering a major surface of the wafer substrate, the major surface of the substrate comprising a plurality of patterned conductors, and wherein the fabric [[is]] comprises substantially a monolayer of nanotubes.
15. (currently amended) A wafer substrate structure having a non-woven fabric of unaligned nanotubes substantially parallel to and covering a major surface of the wafer substrate and wherein the fabric comprises a multilayer fabric having [[has]] a controlled density of nanotubes.
16. (new) A plurality of conductive traces on a substrate, each conductive trace extending substantially parallel to the substrate and comprising a non-woven fabric of carbon nanotubes, the plurality of conductive traces extending substantially parallel to each other and having a spaced relation between adjacent conductive traces.

17. (new) The plurality of conductive traces of claim 16, wherein the substrate comprises a plurality of patterned conductors under the plurality of conductive traces.

18. (new) The plurality of conductive traces of claim 17, further comprising a plurality of patterned conductors over the plurality of conductive traces.